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ABSTRACT

A literature review focused on the effectiveness of ability grouping in kindergarten through the sixth grade. A total of 28 annotations were organized in terms of: (1) types of grouping; (2) effects of ability grouping on behavior, self-concept, and friendship; and (3) academic achievement. Several studies found that students assigned to high ability groups obtain an achievement advantage over students in low ability groups. Other studies found that students assigned to low ability groups made little or no gains in achievement. In general, findings regarding the effects of ability grouping on elementary students were not conclusive. Recommendations for educational practice, a glossary, and a summary of study findings are included. (RH)

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AN ANNOTATED BIBLIOGRAPHY OF THE LITERATURE DEALING WITH THE EFFECTIVENESS OF USING ABILITY GROUPING IN THE ELEMENTARY SCHOOL SETTING K-6

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Study Directed
By

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INTRODUCTION

An important factor determining the teacher's instructional task are the students assigned to the class. ". . . school officials maintain . . . grouping makes teaching and maintaining order easier and more manageable. Many believe that teaching and learning are facilitated if students of similar performance potential are grouped together so that teachers can focus on their particular needs." (Van Fossen, 1987:115) (Gerleman, 1988:18)

Ability grouping of students according to the Dictionary of Education (1973:269) is the grouping of pupils within classes or schools on the basis of some measured mental ability. According to the Encyclopedia of Educational Research, there are two types of ability grouping used at the elementary level. 1) intraclass where students are grouped heterogeneously which ". . . allows for different levels of ability children with different needs to interact." (1982:547) 2) interclass where students are grouped homogeneously ". . . according to similarities of specific characteristics such as mental ability, achievement, social maturity, learning style . . ." (1982:547)

Ability grouping has been a controversial issue since 1917. According to Slavin (p.68) the major concern regarding grouping in the 1920s was in part stimulated by the ". . . concern that schools were serving a larger number of immigrants and children of the poor . . ." Proponents of ability grouping have argued that grouping lets high achievers move rapidly and gives low

achievers attainable goals and extra help." (Slavin, 1988:68) (Hallinan and Sorensen 1983:840) Becker stated, "Grouping . . . may take a toll in personal self-esteem . . . by emphasizing differentiated status among students . . . producing unnecessarily negative expectations or ineffective teaching behavior in classes of low ability." (1987:3)

In general, the research included in this study will cover the positive and negative effects of ability grouping students in achievement, behavior, self-concept and friendship.

STATEMENT OF THE PROBLEM

Ability grouping has a long history of classroom practice and research. The first reported segregation by ability occurred in 1867 in St. Louis, Missouri. (Esposito, 1973; Ricco, 1985; Wilson, 1978) Despite much controversy, ability grouping continues to be practiced at all levels of education.

Informed decisions about grouping require teachers, administrators and parents to be knowledgeable about the effects of ability grouping on students. They should use knowledge when evaluating possible grouping assignments for their schools. "Overall . . . grouping can be a powerful tool in the education of students." (Kulik, Kulik 1987:29) Grouping ". . . may result in stereotyping of classes and their students according to presumed ability and may take a toll in personal self-esteem . . . by emphasizing differentiated status among students . . . and ineffective teaching behavior in classes of low ability thus limiting exposure to models of successful academic behavior. . . ." (Becker, 1987:3)

PURPOSE OF THE STUDY

It was the purpose of this study to provide literature that will support the decision making process of teachers and administrators faced with ability grouping decisions. Wilson and Schmits cited in an informal survey that teachers strongly favor ability grouping. However, ". . . two-thirds of the teachers we sampled stated that they were not familiar with research on the topic of ability grouping. . . ." (Wilson and Schmits, 1987:536)

Primarily, the research literature cited in this study was in the form of an annotated bibliography which deals with the positive and negative effects of ability grouping in the elementary school setting.

ORGANIZATION OF THE STUDY

This study and body of research was divided into three basic areas. The first section dealt with the concept of ability grouping in the elementary school. This section was subdivided into research dealing with the following topics: 1) effects on behavior, and 2) effects on self-concept. The second section of the paper presented research exploring ability grouping in the elementary school and its impact on achievement. The third section branched off into research dealing with ability grouping in the elementary school regarding: 1) types of grouping, and 2) effects of grouping and friendships.

LIMITATIONS OF THE STUDY

The evidence on ability grouping reflects uncontrolled influence of many features of instruction that are not altogether clear-cut. However, the field significantly narrowed when the stipulation was applied to research oriented literature.

The studies often dealt with interclass and intraclass ability grouping at the elementary level. The articles often pointed to the ". . . reliability indicators of academic strengths and weaknesses. . . ." (Ricco, 1985:27) of using intelligence scores to determine ability group placement. Wilson and Schmits concur with Ricco that limiting grouping assignments typically done on the basis of "intelligence, aptitude, readiness, and or reading achievement . . . restricts the range of individual differences within a unit." (Wilson and Schmits, 1978:535)

Organizational arrangements that lead to ability placement may significantly be affected by the individual school. Concerns of administrators and teachers that are not clear-cut are: 1) how decisions are made, 2) stability of assignments, 3) types of class assignments used, 4) alterations of curriculum when the range of abilities are varied, and 5) teacher's management of instruction and discipline.

These limitations provided this researcher with a challenge to evaluate and analyze the available data. "If we want to understand why some students learn more than others, . . . we should examine the instruction they are provided. (Gamoran, 1986:195)

GLOSSARY

ability grouping -- ". . . the grouping of students within classes or schools on the basis of some measured mental ability." (Good, 1973:269)

academic achievement -- ". . . knowledge attained or skills developed in the school subjects, usually designed by test scores or by marks assigned by teachers." (Good, 1973:7)

behavior -- ". . . the action or activities of an organism, that is anything that an organism does, overt, physical, internal, emotional and mental activity." (Good, 1973:58)

heterogeneous grouping -- "the classification of students for the purpose of forming certain groups having a high degree of dissimilarity." (Good, 1973:269)

homogeneous grouping -- "the classification of students for the purpose of forming instructional groups having a high degree of similarity in regard to certain factors that affect learning." (Good, 1973:269)

interclass ability grouping -- A) "assignment of students to classrooms on the basis of ability measured by IQ score, standardized test scores, teacher recommendations." (Haskins, Walden, Ramey, 1983:866); B) ". . . called the Joplin Plan because of its use in Joplin, Missouri, schools." (Good, 1973:269)

intraclass ability grouping -- "assignment of children randomly to classrooms where they are organized into groups by ability within the classroom." (Haskins, Walden, Ramey, 1983:866)

nongraded school -- "a school which groups students according to academic ability, discipline problems, mental and physical capabilities." (Good, 1973:387)

quotient, derivation intelligence -- "a measure of intelligence based on the extent to which an individual's score deviates from a score that is normal for the individual's age." (Good, 1973:465)

placement -- "assignment of a person to a suitable class, course, job training institution, or educational institution in accordance with his aims, capabilities, readiness, educational background and aspirations." (Good, 1973:424)

self-concept -- "perception of self as a person, included abilities, appearance, performance on the job." (Good, 1973:524)

classroom, self-contained -- "a classroom in the form of school organization in which classes are composed of groups of children which remain in one location, with one teacher, for all, or nearly all instruction activities; to be distinguished from a departmentalized classroom." (Good, 1973:104)

self-esteem -- "judgment and attitude an individual has toward self." (Good, 1973:525)

tracking -- "a pattern of subject organization or of course sequence in a school." (Good, 1973:612)

vertical pupil classification -- "placement or grouping of pupils in successive levels of the educational system." (Good, 1973:104)

ANNOTATIONS

PUBLICATIONS CONCERNING THE EFFECTS OF ABILITY GROUPING IN THE ELEMENTARY SCHOOL:

EFFECTS ON BEHAVIOR
EFFECTS ON SELF-CONCEPT

Eder, Donna, Peer Influence on Student Attentiveness During Classroom Lessons, Paper presented at the Annual Meeting of the American Educational Research Association, ED 219 671, New York, New York, March 1982.

Eder's study focused on peer influence as a direct influence on other student behavior. The author examined different types of peer influence including distraction, imitation, and direct contact. Eder videotaped reading classes in first grade classrooms with twenty-three students each. The students were assigned to four ability groups: high, medium-high, medium-low, and low. These groups met daily for twenty minutes for oral reading. The author found: student's behavior affected several peers simultaneously. Imitation was a basic type of peer influence. Verbal behaviors appeared to be more distracting. "The most disruptive type of contact was verbal--between members--setting at opposite sides of the group." (p. 16) Eder's findings for improved management techniques during classroom lessons was through teacher non-verbal rather than "--verbal management which can draw attention to behavior that would otherwise go unnoticed by other group members." (p. 16) Assignment to a specific group was found to have important implications for a student's attentive behavior. "In most cases peer influencing others' attentiveness . . . occurred in the medium-low group . . . indicating . . . group lessons are often more boring and repetitious than high group lessons." (p. 16) Eder concluded "students influenced peers so frequently during teacher-directed lessons . . . suggests that peers are likely to be important influences on students' behavior during most classroom lessons." (p. 16) (31)

Felmlee, Diane and Eder, Donna, "Contextual Effects in the Classroom: The Impact of Ability Groups on Students Attention," Sociology of Education, 56:77-87, Fall 1983.

The focus of this study was to examine the extent to which students inattentiveness was affected by ability group assignments within classrooms. Felmlee and Eder observed a first grade class of twenty-three students from primarily middle-cass backgrounds. The students were assigned to four equal-size reading groups based on the Kindergarten teacher perceptions of reading aptitude. Videotapes of sixteen reading lessons from each reading group were used for analysis. Oral reading was the primary lesson for each group. The ". . . attentive behavior was defined as looking at what was being read or taught. All other behavior was . . . inattentive behavior: looking away, watching other members, playing with objects. . . ." (p. 80) "One variable having a significant coefficient (-.007) is reading aptitude. The higher the reading aptitude of a student, the lower the rate of becoming inattentive during reading lessons." (p. 82) The learning environment had a strong impact on student's behavior: reading length and errors effected attentiveness or inattentiveness. Ability grouping had the greatest effect on student attentiveness. Students became inattentive due to boredom. Students were distracted by verbal and nonverbal actions of others. The impact of these effects became stronger over the school year. The authors concluded that "educational practices can have important implications for students." (p. 86) The students assigned to low ability groups became inattentive because they ". . . are not exposed to equally positive learning environments within schools." (p. 86) (31, 33)

Haskins, Ron. et al, "Teacher and Student Behavior in High- and Low-Ability Groups," Journal of Educational Psychology, 75:856-76, December 1983.

The authors ". . . examined differences in the behavior of teachers and students in high- and low-ability groups within heterogeneous classrooms." (p. 865) Haskins and others conducted their study by observing high and low reading groups from nineteen heterogeneous classrooms to determine if ability grouped students in minority and low-income were negatively affected. The research included informal group observations, and teacher interviews to determine the basis for grouping assignments. "The students were primarily grouped according to . . . the child's ability, teacher-made tests . . . and academic needs of the high- and low-grouped students." (p. 865) The implications of this study revealed the following information: low-group children received more instructional time. Teachers provided low-group students with more drill and corrective feedback than high-group students. Low-group students were more disruptive and off task more frequently. High-group students were often working individually on teacher assigned tasks. Haskins et al concluded, "Thus faced with students of low academic achievement who also tend to disrupt the instructional process, teachers organize their instructional groups and behave toward low-group students in ways that seem well-designed to offset the problems displayed by these students. All in all, we find little reason to question the use of intraclassroom grouping and even less reason to offer this practice as an explanation of the poor academic development of low-income and minority-group students." (p. 875) (7, 31)

Ricco, Lawrence L., "Facts and Issues About Ability Grouping," Contemporary Education, 57:26-30, Fall, 1985.

Ricco discussed the issues surrounding ability grouping and explained how, with minimal negative effects, it can be used to raise achievement, behavior and self-concept. He researched the various ways currently being used by teachers to ability group. These consisted of Intelligence (IQ) tests, achievement tests and teacher recommendations. Ricco suggested intelligence tests and achievement tests measure a narrow range of ability. Children from low socioeconomic homes score lower. Most tests measure present rather than potential ability. Students scores are affected by physical environment, attitude, physical and emotional health. ". . . the correlation between achievement and IQ scores generally is lower among minority students, indicating that such tests may be less reliable indicators of the academic strengths and weaknesses of these students compared to others." (p. 27) The author offered the following considerations for ability grouping to be successful. "It must benefit students, each one's needs must be determined individually, and each student must be placed in a program selected or formulated to meet those needs." (p. 29) Ricco concluded "groupings should not be permanent, . .. should be directly related to instructional objectives, . . . lower groups should not contain disproportionate number of minority students, and . . . if grouping does not result in student achievement, it should be altered or discontinued." (p. 29) (3, 6, 29)

Wilson, Barry J., and Schmits, Donald W., "What's New in Ability Grouping," Phi Delta Kappan, 535-536, April, 1978.

Wilson and Schmits investigated the area of ability grouping and what was new in the field. "(The first reported use occurred in 1867 in St. Louis, Missouri)" (p. 535). The authors stated that ". . . a practice so long and widely used is not well supported by research evidence." (p. 535) One such limitation to grouping expressed by the authors was . . . classification of students into separate ability categories and instructional units is typically done on the basis of intelligence, aptitude, readiness and/or reading achievement scores, and this type of grouping restricts the range of individual differences within a unit." (p. 535)

One of the results of Wilson and Schmit's workshop cited in an informal survey ". . . showed that they (teachers) strongly favor ability grouping." (p. 535) However, ". . . two-thirds of the teachers we sampled stated that they were not familiar with research on the topic of ability grouping. Perhaps many teachers are unaware of the potential harm to children that may result from ability grouping." (p. 536) Even given this information, the authors found that ". . . the majority of teachers who were familiar with the research continued to favor ability grouping." (p. 536) Experienced teachers tended to favor grouping more strongly than teachers with less experience.

The authors suggest that ". . . ability grouping is also seen as an educational practice that reinforces and perpetuates segregation of children along ethnic and socioeconomic lines . . . a considerable challenge remains for practitioners and researchers: to communicate and to work together in identifying an appropriate justification for this century-old practice that directly affects millions of children in our schools." (p. 536) (3, 4, 6, 30)

Haller, Emil J. and Davis, Sharon A., "Does Socioeconomic Status Bias the Assignment of Elementary School Students to Reading Groups?" American Educational Research Journal, 17:409-418, Winter, 1980.

This study examines the results of standardized reading test scores, and how family and teacher socioeconomic status (SES) influenced segregation in the ability group reading classroom. Data were collected from thirty-seven fourth, fifth and sixth-grade classrooms in central New York. Nine-hundred sixty-three students were included in this study. The instruments used to measure students' percentile scores were the ITBS reading comprehension, and The Home Index used to measure family SES. Haller and Davis "paired the reading groups in each classroom . . . the top with the middle group and the middle with the lower group. . . . The effect of measured reading ability is three times more powerful than home background in the case of the upper groups and ten times more powerful for the lower groups. In neither instance is there support for the proposition that SES has a greater effect on assignment than reading ability." (p. 413) The authors concluded reading achievement was a greater determiner of group placement than parent SES. They also suggest that reading groups based only on teacher judgment produced twenty percent higher segregation." (p. 416) Teachers' SES backgrounds ". . . are not significantly related to . . . class segregation in their classrooms." (p. 416) (29)

Eder, Donna, "Ability Grouping and Students Academic Self-Concepts: A Case Study," Elementary School Journal, 84:149-161, November, 1983.

The purpose of Eder's study was to identify students' academic self-concepts of ability grouping in a first-grade classroom. The data examined included the degree of student awareness of different groups and ability, degree to which students engaged in within group comparisons, relationship between teacher, praise, and academic performance, and students academic self-esteem. Eder utilized videotaped observations, and interviews with students over one academic year in one ability group reading class. During the year thirteen of the twenty-four students were observed in cross-group comparisons. "The discussions . . . were initiated by members of the high or medium high groups." (p. 153) The author noted the results of self-concept with children of this age should be viewed with some caution. "Students' self-images may . . . be influenced by their teachers' perceptions of their ability." (p. 150) Students should be assessed for overall academic self-concept rather than their reading ability. Eder's findings indicated that more studies at various grade levels should be undertaken. (30)

Abadzi, Helen, "Ability Grouping Effects on Academic Achievement and Self-Esteem in a Southwestern School District," Journal of Educational Research, 77:287-292 May/June 1984.

The author discussed the effects of ability grouping on academic achievement and self-esteem of six-hundred fourth-grade students selected at random from eight schools in a Texas school district. The evaluative instruments used to group students were: ITBS and the Self-Esteem Inventory. The instruments were administered at the beginning of the year and again one month before the end of the same school year. Students were ability grouped in reading, language, mathematics, and science but mixed grouped for other subjects. Abadzi evaluated the grouping related to academic achievement and self-esteem after a year of instruction and observation. "The lowest third of the high ability students showed the largest gains, 4.85 NCE, while the upper third of the regular students showed the largest losses, 2.6 NCE." (p. 289) "Students who realistically expect to be included in the high ability group are the ones most influenced by placement, because students near the cutoff would be most likely to have realistic expectations of being included . . . High ability students tend to have higher self-esteem scores as reflected by higher academic achievement, although no significant pre-or post-test changes were found. Lower ability students . . . may have experienced frustration because they were the lowest students in their class." (p. 292) The Texas school district replaced their single criterion grouping program with a more flexible with-in class grouping system after a review of Abadzi's recommendations. The author offered the following conclusions for ability grouping. ". . . it is used, possibly because parents of high ability students, teachers, and administrators feel favorably toward it." (p. 287) "Students most affected were the ones most likely to be misclassified." (p. 292) (29, 33)

Van Fossen, Beth, et al, "Curriculum Tracking and Status Maintenance," Sociology of Education, 60:104-122, April, 1987.

The authors conducted a two year study to determine the effects of curriculum grouping for students who have experienced one level of ability grouping in school. Data collected was from criterion-related measures and student interviews of perceptions of actual groupings. The data was found to be sixty percent correct. Analysis of data focused on three areas: the pattern of grouping students and class bias. Ability group measurement of achievement. A need for grouping experiences related to achievement by individual ability grouping. Van Fossen and others suggested grouping decisions are based on early established teachers' recommendations, grade performance which may have a substantial impact on future student achievement. Once children are grouped ". . . they have systematically differing experiences, which are relevant to ultimate educational attainment . . ." (p. 117) and self-esteem. The authors also indicated that self-esteem of students increased for high ability-groups whereas students in low ability-groups declined in self-esteem. Regarding the placement of students in ability groups, ". . . school officials maintain . . . grouping makes teaching and maintaining order easier and more manageable. Many believe that teaching and learning are facilitated if students of similar performance potential are grouped together so that teachers can focus on their particular needs." (p. 115) Once students are grouped, "the links connecting socioeconomic background . . . become more evident . . . in social background through the process" (p. 117) of selection for grouping. (1, 29)

ABILITY GROUPING IN THE ELEMENTARY SCHOOL:
ACADEMIC ACHIEVEMENT

Esposito, Dominick, "Homogeneous and Heterogeneous Ability Grouping: Principal Findings and Implications for Evaluating and Designing More Effective Educational Environments," Review of Educational Research, 43:163-179, Spring, 1973.

The author conducted a detailed review of homogeneous and heterogeneous ability grouping, and discussed the findings in terms of the relationship between ability grouping and affective learning, ethnic and socioeconomic dimensions. "The findings regarding the impact of homogeneous grouping on the affective development of children is that it tends to build, . . . or inflate the self-esteem of children assigned to high ability groups, and reduce the self-esteem of children assigned to average and low-ability groups." (p. 168) Esposito's research findings that impact ". . . grouping practice which separates children according to performance . . . with respect to ethnic and socio-economic segregation . . . pre-determines the placement of a disproportionate number of children of non-white and lower socioeconomic status to the lowest homogeneous ability groups." (p. 169) The authors research findings were summarized as follows: Ability grouping does not have along lasting positive effect on achievement. Ability grouping has a negative effect on students affective development. Ability grouping segregates students according to IQ and standardized tests, also stigmatizes ethnic and socioeconomic status. Ability grouping related to improved academic performance is subject to curriculum modification. "The current practice of ability grouping . . . which educators and governmental agencies sanction has been sub-quality education in a setting that is charged with the responsibility of developing each child to his fullest." (p. 177) Esposito concluded that, ". . . the educational system should provide the psychostructural foundation to support the development of more effective approaches to instruction." (p. 177) (3, 29)

Rule, Judy, Effects of Multigrade Grouping on Elementary Student Achievement in Reading and Mathematics, Paper received in the 1984 American Educational Research Association Division H award for Best Report of Instructional Research, May, 1983.

This study examined the effects of multigrade classes on students achievement in reading and mathematics. The sample included 3,360 third through sixth grade students in the Mesa public schools. The California Achievement Test results were analyzed. The results of this study were mixed and at times exhibited conflicting results. Rule stated that the conditions and purposes vary greatly, and it was impossible to control all variables in the actual teaching situation. ". . . when ability grouping was favorable toward achievement, substantial changes were made in teaching methods and materials." (p. 52) The author offered the following considerations: Decision to use multi-grade ability grouping should be based on other criteria than achievement. Grouping often presented a false security. Grouping simplified instruction, it allowed students to progress at their own rate. The conclusion stated that no detrimental effect in reading or mathematics achievement occurred with multi-grade grouping, however, she suggested it be used only with average-high students whereas homogeneous group settings were more favorable. (29)

Hallinan, Maureen T. and Sorensen, Aage B., "The Formation and Stability of Instructional Groups," American Sociological Review, 48:838-851, December, 1983.

Th author examined factors that influence the formation and stability of ability grouping in the elementary classroom. The sample studied forty-eight classes of elementary students from California. The mean class size was 30.7 with a standard deviation of 5.8. The schools were K-8 self-contained. Information on the instructional groups were obtained from the reading and mathematics teachers six times a year. Academic achievement and standardized achievement tests were evaluated. The authors noted the following constraints which impeded teachers from forming instructional groups that reflect student achievement: need for discipline, reduce student inattention, and organize student lessons in a limited time frame. Analysis of data reflected that no matter what distribution of students to various groups, teachers had a tendency to form three instructional groups of equal size. To maintain equal size required movement from one group to another. "When . . . change involved reassignment to a lower ability group, . . . student achievement, self-esteem are likely to be affected." (p. 850) Students who surpass other group members may show their achievement rate due to peer pressure or lack of opportunity to learn. ". . . the failure of teachers to permit student mobility . . . prevents grouping . . . from achieving its intended effect." (p. 850) (2, 29)

Kulik, Chen-Lin C., and Kulik, James A., Effects of Ability Grouping on Elementary School Pupils: A Meta-Analysis, Paper presented at the Annual Meeting of American Psychological Association, Canada, August, 1984.

The purpose of this paper was to examine the practice of ability grouping in relation to positive or negative effects on elementary school children. The authors used thirty-one studies of grouping students in different classes of ability. Two major areas: student achievement and student self-concept were the main focus areas for the Kulik's. The results of the analysis showed that ". . . grouping raised student grade-equivalent scores by approximately two months." (p. 5) In programs designed for the gifted student where they received enriched instruction, ". . . grouping raised achievement test scores by .49 standard deviations." (p. 3) The programs designed for the ". . . more representative populations, . . . raised achievement test scores by .07 standard deviation." (p. 3) The findings of grouping regarding self-concept, ". . . had a trivial or small positive effect . . . the average effect was to reduce self-acceptance by .06 standard deviations." (p. 3) The authors concluded that, "recent reviews have tended to emphasize the negative effects that grouping has on self-concept of low-ability pupils. Such conclusions, however, are usually based on anecdotal and uncontrolled studies." (p. 4) In general, student achievement increased from grouped classes rather than ungrouped classes. (31)

Gamoran, Adam, "Instructional and Institutional Effects of Ability Grouping," Sociology of Education, 59:185-198, October, 1986.

The author proposed to measure the affects of student achievement in ability group classrooms. The data used were twelve first grade reading classes, two hundred-sixty students over approximately three-week intervals, during one school year. Students completed a reading aptitude test early in the school year and in December, March, and May. School records and teacher interviews provided family information. The tests consisted of a random sample of works taught. The proportion of correctly read words was multiplied by the total number of words taught to determine the number of words learned. "By testing students on what they were taught . . . chances of detecting instructional effects . . . maximized." (p. 189) Gamoran found ". . . reading aptitude remains the most powerful influence on learning . . . Its standardized coefficient .55 is nearly twice the size of the coefficient for SES." (p. 191) The author identified several factors about ability grouping: learning was affected as soon as students were assigned to groups. Strong influence of instruction was responsible for rise in achievement. Effects of background (SES) declined when instructional influenced the model. "Aptitude clearly affects learning mainly because students with higher aptitudes are taught more words. . . ." (p. 192) The author offered reasons for his success isolating instructional effects from other grouping effects. Precise measure of content instruction, and students tested according to what they were taught. Aptitude tests provided good control as it measured children's success. "If we want to understand why some students learn more than others, . . . we should examine the instruction they are provided." (p. 195) (6, 30)

Maxwell, Laurie, Making the Most of Ability Grouping Research in Brief, Office of Educational Research and Improvement, Washington, D.C., November, 1986, 1-3, ED280-888.

The article summarized results of a study conducted by the Center for Research at Johns Hopkins University. The Center examined one-hundred studies of five grouping plans used in elementary schools. 1) intra-class, 2) inter-class, 3) grouping for reading, or mathematics, 4) the Joplin Plan, and 5) nongraded or individual instruction. Maxwell stated that on the surface, it makes sense to group by ability. "Supposedly, they (students) will be better off academically and emotionally by not competing with high achievers." (p. 2) The opponents of ability grouping state, ". . . ability grouping . . . a practice that "labels" low achievers and produces low expectations . . . may be self-fulfilling. Also, . . . high achievers must learn to interact with low-achievers and vice versa, because they'll have to do so through life." (p. 2) Maxwell's findings indicate that assigning students to ability groups by achievement tests does not raise student achievement. However, grouping for one or two subjects, inter-class (Joplin Plan), can be highly effective. In conclusion, ability grouping that follows three criteria that Maxwell listed should boost student achievement. 1) Students placed together according to skills being taught. 2) Grouping should be flexible enough to allow teachers to reassign students to different groups if performance changes. 3) Allow teachers to vary level of instruction in response to student needs. (29)

Kulik, James A. and Kulik, Chen-Lin C., "Effects of Ability Grouping on Student Achievement," Equity and Excellence, 23:22-30, Spring, 1987.

The authors examined two major ability grouping approaches: between-class and within-class grouping. Between-class included comprehensive grouping programs for talented students, and the Joplin Plan. Within-class surveyed total class and talented programs. The Kulik's major outcome was focused on grouping and its effect on student achievement. The primary source of data for the analysis were computer searches. They established further criteria for the meta-analysis; the results had to be quantitative, instructed control group as well as one experimental treatment and the studies had to take place in actual classrooms. The authors offered the following conclusions: The programs developed for talented students reflected the strongest gains, "talented students raised their achievement scores by .62 standard deviations." (p. 28) Programs designed for all students had lower achievement scores. "Overall achievement scores were .06 standard deviations." (p. 28) Kulik and Kulik stated that "grouping can be a powerful tool in the education of gifted and talented students . . . this . . . point should be given major emphasis." (p. 29) (3, 30)

Slavin, Robert E., "Synthesis of Research on Grouping in Elementary and Secondary Schools," Educational Leadership, 67-74, September, 1988.

Slavin studied the effects of ability grouping as it impacts the academic and psychological aspects of students behavior. Slavin summarized what was known about the achievement effects of various forms of grouping. Among his findings, Slavin stated ". . . Grouping may doom children who are not in the top tracks to second-class instruction and, ultimately, second-class futures." (p. 68) Slavin also stated that ". . . the most controversial form of grouping is assignment of students to groups according to ability or performance." (p.68) "Proponents have argued that ability grouping lets high achievers move rapidly and gives low achievers attainable goals and extra help." (p. 68) Slavin's research ". . . identified fourteen methodologically adequate studies of this practice at the elementary level and found the median effect size on standardized achievement measures to be approximately .00." He further concluded ". . . achievement effects of ability class assignments (compared to heterogeneous grouping) are essentially zero." (p. 68) In summary, Slavin concluded the following major points ". . . the mechanisms by which different grouping plans may have their effects are not at all clear." (p. 75) Slavin further stated that ". . . we do know enough to dispel the notion that simply grouping students by ability will in itself accelerate their achievement." (p. 75) (1, 2, 29)

ABILITY GROUPING IN THE ELEMENTARY SCHOOL:
TYPES OF GROUPING
EFFECTS OF GROUPING AND FRIENDSHIP

Ekstrom, Ruth B., "Experimental Studies of Homogeneous Grouping: A Critical Review," School Review, 69:216-226, Summer, 1961.

The focus of Ekstrom's article was to study homogeneous and heterogeneous grouping in order to determine the effect of achievement with a control group. ". . . ability grouping alone cannot insure improved achievement . . ." (p. 216) The results of the studies were at times contradictory. Ekstrom summarized: no statistically significant differences between groups. Homogeneous grouping seemed effective for low ability students and least effective for high ability. Superior-ability homogeneous revealed an advantage in achievement. Several studies of gifted students were found contradictory due to the fact that the evaluative instruments used were not suited to the group. "Because of their special ability the students scored well beyond the level where the tests wee appropriate measures." (p. 220) Ekstrom noted that high ability students showed greater achievement when in competition with students of wide range ability. In summary, Ekstrom concluded that a major deficiency in most of the experiments of heterogeneous and homogeneous grouping were failures to provide same course content and similar method of experimental design for both groups. The studies that provided differentiation of methods and materials tended to favor homogeneous grouping. (30)

Rowan, Brian and Miracle, Andrew, "Systems of Ability Grouping and the Stratification of Achievement in Elementary Schools," Sociology of Education, 56:133-144, July, 1983.

Rowan and Miracle analyzed the effects of ability group systems on student achievement. Data was compiled from a study of fourth grade students in a "single urban school district." (p. 133) The authors discussed two proposed explanations for achievement differentials in grouping systems. One was the "differential peers hypothesis" and the other was the "differential instruction hypothesis." In the analyzed data, the authors examined the peer allocation process and differential instruction in the context of two types of grouping systems. "Within-classroom grouping for reading instruction and a cross-classroom ability grouping" (p. 134) Both types of grouping had direct effects on reading achievement. "Both have large, direct effects on achievement, even controlling for prior achievement, with students in higher groups obtaining an achievement advantage over students in lower groups by virtue of their group placement." (p. 141) Rowan and Miracles concluded that "instructional processes and peer group formation tended to disadvantage students in lower strata of the cross-classroom ability group system but to work in favor of students in lower strata of the within-classroom reading group systems." (p. 142) (30, 33)

Roberts, Alasdair, "Group Methods? Primary Teachers' Differentiation Policies in Mathematics," Educational Review, 36:239-248, November, 1984.

Roberts utilized interview evidence from upper primary teachers in the Aberdeen area. "Although the interview method forces one to discuss results in terms of teachers' perceptions or policies, it can be argued that in the area of class control, interviews come closer to the realities of classroom life than interaction analysis or inspection, since the presence of a high status visitor in the room makes bad behavior less likely." (p. 241) Roberts also concluded from his interviews that "teachers need to modify the over-individualized approach which most of them employ in favor of teaching children to collaborate in groups." (p. 241) Regarding the placement of students in group situations, Roberts concluded that ". . . researchers are having to come to terms with the possibility that, "as a group teachers are as capable of understanding schooling and engaging in reflective action as others in the educational hierarchy." (p. 247) It was concluded that ". . . teachers' accounts may distort reality to some extent, they nevertheless offer a valuable insight into how the needs of children can be met in mixed ability classes." (p. 239) (31)

Haller, Emil J. and Waterman, Margaret, "The Criteria of Reading Group Assignments," The Reading Teacher, 38:772-781, April, 1985.

The purpose of this article discussed what criteria teachers use in assigning students to ability groups. The authors collected data from sixty fourth, fifth, and sixth grade teachers in five different school districts. The teachers were interviewed and videotaped. The interview questions revealed the grouping task and margin-pairs task when assigning students to ability groups. The teachers rank-ordered the students considering only the reading ability. Finally, hard case children were identified for grouping. ". . . five general categories listed in order of frequency, reading ability, behavior, personality, general academic competence, work habits and home background." (p. 775) The emphasis for placing the nine-hundred eight reading students was forty-five percent reading ability, academic competence was second, and lastly was home background. ". . . we could find no evidence that any of these factors were used in a racially discriminatory fashion." (p. 776) Haller and Waterman summarized that when placement was unclear, teachers rely on other attributes than reading skill. "We think this phenomenon is a consequence of forcing a teacher to make virtually impossible distinctions." (p. 277) The conclusion suggested that reading groups where merely based upon ability groups was considered misleading. "They are created on the basis of complex amalgams of criteria . . . weighted by different teachers with different pedagogical strategies in mind." (p. 780) (31)

Watson, Ken., "Mixed-Ability Classrooms Produce Superior Results," Highway One, 57-63, Fall, 1985.

Watson based the research in his paper on the idea that many teachers were "unaware of both the research evidence supporting mixed-ability classes and of the changes in teaching method that are needed if a school . . . decides to move from a streamed to an unstreamed situation." (p. 57)

Watson stated, "Discouragement . . . comes not from working alongside brighter children as much as being segregated from them." (p. 59) "As for the argument that the less able are better off in separate classes where their special needs can be catered for, research study after research study has shown that this is not the case." (p. 59) Watson cited a 1980 Calberg and Karale research where fifty studies of special class versus regular class placement were surveyed. It was concluded that ". . . there is no justification for the placement of low IQ children in special classes." (p. 59)

Watson cited British research that a mixed-ability grouping situation would not hold back the brightest students. "A small experiment on the relative merits of graded and mixed-ability classes found after one year no significant difference in the performance of students in the two groups and at the end of the second year a shift of students in the mixed-ability group." (p. 59)

Watson further concluded that ". . . it must be stressed that the key to successful mixed ability teaching seems to lie in a willingness on the part of the teacher to use flexible grouping." (p. 60) An important facet of Watson's findings centered around "the value of having pupils of widely differing abilities working together in groups has been amply demonstrated in the transcripts of small-group discussion . . . a careful study of such transcripts will provide at least one explanation of why it is that the ablest pupils appear to do better in the mixed-ability situation." (p. 61) (24, 29, 30, 34)

Webb, Noreen M., "Peer Interaction and Learning in Cooperative Small Groups," Journal of Educational Psychology, 74:642-655, November, 1985.

Webb investigated two small groups totalling seventy-seven students over a two week unit. The groups were taught two mathematical concepts. One group consisted of mixed-ability students and the other of uniform-ability level students. A tape recorder was utilized to record conversation and interaction among each group. Webb stated that ". . . the tape recording procedures captured not only the sequences interaction but also the rich detail of group discussions." (p. 645) Webb further stated that ". . . even with sophisticated observation instruments, it is difficult to distinguish reliably between explanations and terminal feedback." (p. 654) Therefore, stated Webb, "the interaction variables and procedures used in the present study help account for the strength of the relationship found." (p. 654) Webb found that, "Medium-ability students in uniform-ability groups achieved more and received more explanations than medium ability students in mixed-ability groups. . . . There was a curvilinear relationship between ability and achievement in mixed-ability groups: Highs performed best, and mediums and low showed similar achievement. In mixed groups, highs gave more explanations than lows." (p. 652) (30, 31)

Gerleman, Sherry L., "An Observational Study of Small-Group Instruction in Fourth-Grade Mathematics Classrooms," Elementary School Journal, 88:17-27, September, 1987.

This article presented research findings that focused on small-group instruction including teacher, group, and individual behaviors and use of time. Data were gathered during forty-eight observations of eleven fourth-grade mathematics classrooms. Grouping was based on three factors according to Gerleman. The teacher, the students and content taught. Teacher criteria for small grouping practices were to accommodate individual differences in "ability and achievement, speed of working, work habits, responsibility . . ." (p. 24) ". . . however, teachers used groups when they found it was desirable to do so but often used whole-group instruction." (p. 22) Gerleman concluded that: teachers vary in manner in which they implement small-group instruction. They needed to coordinate and manage several groups simultaneously. ". . . over fifty percent of the time available for the teacher to work with groups was spent on review." (p. 27) It was also noted that small-group instruction can be used with other teaching methods to enhance student achievement. (1, 31, 32)

Thelan, Herbert, et al., "Social Issues and Educational Alternatives," Classroom Grouping for Teachability, New York, John Weley and Sons, Inc., 1967, 22-31.

The purpose of the book was centered around the idea of how the resources of teachers and students can be utilized effectively for instructional purposes. Thelan and others devoted three years of research to students experiences in classrooms, interviewing fifteen teachers, numerous administrators and students. Also implemented for documentation were various student assessment reports, team teaching, video tapes, and feedback panels all directed toward the problem of ability grouping. "It is assumed that children learn better or are more easily taught when they are segregated by ability--it may be a beguiling theory to think of all our children going to school together, but will it serve the students best interests to send them to schools where a child with an IQ of seventy sits beside one of one-hundred seventy, and where morally weak children freely associate with the child who has been carefully raised to distinguish between right and wrong and to conduct himself responsibly." (p. 26) Thelan found that whenever ability grouping was discussed the question of socioeconomic-class grouping reoccurred. Summaries included the following: seventy-three percent of the children in high ability groups were from higher socioeconomic levels. Seventy-nine percent of the children in low-ability groups were also in the lower socioeconomic levels. In conclusion the evidence supported social advantages of heterogeneous grouping over homogeneous grouping. "The student is a member of a society in every one of his classes, regardless of subject matter, each class should examine the aspects of its organization, expectations, and . . . engage in productive work." (p. 31) (30)

Hallinan, Maureen T., and Sorensen, Aage B., "Ability Grouping and Student Friendships," American Educational Research Journal, 22:485-499, Winter, 1985.

Hallinan and Sorensen explored the effects of social relationships of children in ability groups. Data were collected on students in forty-eight classes in ten elementary schools in California. Reading and mathematics teachers provided grouping data and the researchers collected data on children's friendships from a sociogram six times during the school year. The authors reported three findings that demonstrated a relationship between grouping and social relations: best friends in ability groups become denser over the years, they become more cohesive over time, and revealed a positive effect of organizational characteristics of grouping students. "Each of the analyses supports the same conclusion, . . . membership in the same ability group increases the likelihood that students will become best friends." (p. 497) It is not clear that ability grouping would be as effective in promoting friendships . . . if the students remained together for only one subject." (p. 498) Hallinan and Sorensen concluded there are positive and negative advantages for children's social development. "The amount of time students spend in ability groups clearly determines the magnitude of the effects of grouping on friendships." (p. 486) (30)

Hallinan, Maureen and Sorensen, Aage, "Ability Grouping and Sex Differences in Mathematics Achievement," Sociology of Education, 60:63-72, April, 1987.

The focus of this study was on the examination of previously ignored ways in which sex differences in mathematics achievement factors as a possible means of teachers ability grouping students. The authors obtained data from ten public and private schools in California. Standardized achievement tests wee administered to all students in the fall and spring. Tests included CAT, ITBS, and the Metropolitan Achievement Test. Grade-equivalent scores were used. "Researchers have suggested that females develop negative attitudes toward mathematics because they view it as a . . . male subject. . . ." (p. 63) According to Hallinan and Sorensen, they found no effect of race or sex on assignment to the high group. The higher the student's standardized test in mathematics, the likelihood of being assigned to a high math group. Two analyses were drawn from this study: ability grouping for mathematics has no direct effect on mathematics achievement, and class size has a negative effect on achievement. The authors concluded that the advantages of ability grouping are offset by the disadvantages. "In addition, our results show that females are not disadvantaged by the way the class is organized . . . and do not experience a different effect of membership in the high group than boys." (p. 71) (30)

Becker, Henry Jay, Addressing the Needs of Different Groups of Early Adolescents: Effects of Varying School and Classroom Organizational Practices on Students from Different Social Backgrounds and Abilities, Center for Research on Elementary and Middle Schools, Baltimore, 1-26, June, 1987.

This article presented the results of a study that addressed the issue of school organizational patterns affecting the academic learning of students of different backgrounds and abilities. Data for the study were obtained from eighty-thousand sixty-grade students from Pennsylvania. The study examined the advantages and disadvantages of alternative forms of class organization. The author methodically described various forms of grouping currently used in grouping students for academic achievement. Grouping ". . . may result in stereotyping of classes and their students according to presumed ability and may take a toll in personal self-esteem . . . by emphasizing differentiated status among students . . . and ineffective teaching behavior in classes of low-ability thus limiting exposure to models of successful academic behavior. . . ." (p. 3) Becker concluded that ability-grouping had benefits for some students and costs for other students, however, school administration could act in favor of grouping that best met certain educational goals and students needs. (2, 3, 29)

SUMMARY

Research concerning grouping for instruction by ability has produced inconsistent results regarding the effects of ability grouping on student academic and psychological behavior.

Slavin (1988), Esposito (1973), Becker (1987) reported that grouping may doom children who are not in the high group. Research has not proven to dispel that grouping students will accelerate achievement.

In the studies of the effects of ability grouping for initial placement of students, Abadzi (1984), Rule (1983), and Van Fossen (1987) found that ability grouping was favorably accepted because parents of high ability students, teachers and administrators found grouping simplified instruction.

Maxwell (1986), Ricco (1985), Watson (1985), and Hallinan (1983) discussed a need for grouping that allows student mobility into different groups in response to student needs, rather than the usual permanent group assignment. They agreed that if grouping does not result in student achievement, it should be altered or discontinued.

Of the researchers whose studies reflected the effects of ability grouping on socioeconomic background, Haller and Davis (1980) found no significant related segregation in their study. However, Van Fossen (1987) found that once students were assigned to a group, the links connecting socioeconomic level became evident. Esposito (1973) added grouping segregates a disproportionate number of non-white and lower socioeconomic

level students to the lowest ability groups. Wilson and Schmits (1978) and Eder (1983) agreed that grouping tends to reinforce segregation of students along ethnic and socioeconomic lines. Thelan (1967) found, when grouping occurred, seventy-three percent of the students in the high group were form higher socioeconomic levels, and seventy-nine percent of the students in the low ability group were also in the low socioeconomic level.

Rowan and Miracle (1983) found that within-class and across-class grouping had direct effects on achievement in reading, with students in the higher group scoring higher. Ekstrom (1961) added, most students scored well beyond the level where the tests were measured. Hallinan and Sorensen (1987) had similar findings. Kulik and Kulik (1987) and Gamoran (1986) found testing students on what they were taught reflected maximized learning.

Hallinan and Sorensen (1985) explored the effects of ability grouping of two or more classes and friendship. They found that the likelihood of best friends became denser over time. However, their study was inconclusive for students grouped for only one class.

Webb (1985) found that average students in homogeneous ability groups achieved more and received more explanation than students in heterogeneous groups. In heterogeneous groups the highs performed best, and the medium and low students showed similar gains. Watson (1985) agreed that high students in a heterogeneous group would not be held back. Watson added, the

key to successful heterogeneous instruction appears to be flexible grouping practices by the teacher. Roberts (1984) concurred with Webb and Watson. In addition, Roberts considered teacher accounts of student achievement offered a valuable insight to meet the needs of all students in a heterogeneous class.

Peer influencing others, verbal outbursts, looking away, and playing were described as indicators of boring, repetitious group lessons. Eder (1982) and Felmlee (1983) concluded that educational practices had important implications for student achievement. Haskins (1983) reported that students faced with low academic achievement tend to disrupt the instructional process. Teachers need to organize groups in ways that motivate students with more drill, and corrective feedback.

Haller and Waterman (1985) found that student reading placement was unclear at times. Teachers had to rely on other student attributes for placement, such as: reading ability, behavior, personality and work habits. The authors strongly disagreed with forcing teachers to make impossible distinctions for student placement in reading groups.

In answer to Haller and Waterman (1985), Kulik and Kulik (1984) reported positive gains for students in all reading groups, which are usually based on achievement, anecdotal, and uncontrolled studies.

Gerleman (1987) and other researchers questioned the practice of ability grouping for instruction. The importance of

groupings were noted in order to accommodate student differences, speed of working and work habits. Gerleman stated, ". . . teachers use groups when they found it was desirable to do so but often used whole group instruction." (p. 22)

CONCLUSION

The research explored in this study clearly indicated many unanswered questions regarding the effects of ability grouping on elementary students. ". . . educational practices can have important implications for students." (Felmlee, 1983:86) As Abadzi discovered in her studies, ". . . ability grouping is used, possibly because parents of high ability students, teachers, and administrators feel favorably toward it." (Abadzi, 1984:287) Many studies found that students assigned to high ability groups, ". . . have large, direct effects on achievement . . . with students in high groups obtaining an achievement advantage over students in lower groups by virtue of their group placement." (Rowan, 1983:141)

Conversely, other studies found students assigned to the low group made little or no gains in achievement. Eder and Abadzi noted low ability grouping tended to have a negative result on self concept and students may be influenced by their teachers' perceptions of their ability. Also, grouped students may have experienced frustration because they were the lowest students in their class or possibly misclassified.

Ability grouping could have negative long term effects on student achievement. One of Abdazi's results stated, ". . . having expectations of being included in a high ability group . . . yet placed in a low group, for class may reflect large academic losses . . . and low self-esteem." (p. 292)

The findings regarding the effects of ability grouping on elementary students were not conclusive. The majority of studies regarding the effects of intraclass ability grouping and interclass ability grouping found slight gains for high achievers tended to be offset by negative effects on self-esteem for low-achievers. Watson stated, "Discouragement . . . comes not from working alongside brighter children as much as being segregated from them." (p. 59) Watson further concluded that, ". . . it must be stressed that the key to successful mixed-ability teaching systems to lie in a willingness on the part of the teacher to use flexible grouping." (p. 60)

RECOMMENDATIONS

It is recommended that:

1. Students needs must be determined before assignments to an ability group in order to meet those needs.

2. Student groupings should not be permanent, and if grouping does not result in achievement, it should be altered.

3. Teaching methods and instructional materials selected for appropriate ability group needs.

4. Placement of students in ability groups should reflect teacher judgment as well as achievement tests.

5. Test students on materials taught to maximize instructional effects.

6. Assignment of students to heterogeneous classes for all subjects except reading.

7. Small homogeneous classes for reading instruction.

8. A student may have high ability in one subject and low ability in another, so care should be taken not to stereotype a student in one particular level.

BIBLIOGRAPHY

Abadzi, Helen, "Ability Grouping Effects on Academic Achievement and Self-Esteem in a Southwestern School District," Journal of Educational Research, 77:287-292 May/June 1984.

Becker, Henry Jay, Addressing the Needs of Different Groups of Early Adolescents: Effects of Varying School and Classroom Organizational Practices on Students from Different Social Backgrounds and Abilities, Center for Research on Elementary and Middle Schools, Baltimore, 1-26, June, 1987.

Eder, Donna, "Ability Grouping and Students Academic Self-Concepts: A Case Study," Elementary School Journal, 84:149-161, November, 1983.

Eder, Donna, Peer Influence on Student Attentiveness During Classroom Lessons, Paper presented at the Annual Meeting of the American Educational Research Association, ED 219 671, New York, New York, March 1982.

Ekstrom, Ruth B., "Experimental Studies of Homogeneous Grouping: A Critical Review," School Review, 69:216-226, Summer, 1961.

Encyclopedia of Educational Research, Vol. 2 New York: Free Press, 1982.

Esposito, Dominick, "Homogeneous and Heterogeneous Ability Grouping: Principal Findings and Implications for Evaluating and Designing More Effective Educational Environments," Review of Educational Research, 43:163-179, Spring, 1973.

Felmlee, Diane and Eder, Donna, "Contextual Effects in the Classroom: The Impact of Ability Groups on Students Attention," Sociology of Education, 56:77-87, Fall 1983.

Gamoran, Adam, "Instructional and Institutional Effects of Ability Grouping," Sociology of Education, 59:185-198, October, 1986.

Gerleman, Sherry L., "An Observational Study of Small-Group Instruction in Fourth-Grade Mathematics Classrooms," Elementary School Journal, 88:17-27, September, 1987.

Good, Carter V., Dictionary of Education, New York: McGraw-Hill Book Company, 1973.

Haller, Emil J. and Davis, Sharon A., "Does Socioeconomic Status Bias the Assignment of Elementary School Students to Reading Groups?" American Educational Research Journal, 17:409-418, Winter, 1980.

Haller, Emil J. and Waterman, Margaret, "The Criteria of Reading Group Assignments," The Reading Teacher, 38:772-781, April, 1985.

Hallinan, Maureen T., and Sorensen, Aage B., "Ability Grouping and Student Friendships," American Educational Research Journal, 22:485-499, Winter, 1985.

Hallinan, Maureen T. and Sorensen, Aage B., "The Formation and Stability of Instructional Groups," American Sociological Review, 48:838-851, December, 1983.

Hallinan, Maureen and Sorensen, Aage, "Ability Grouping and Sex Differences in Mathematics Achievement," Sociology of Education, 60:63-72, April, 1987.

Haskins, Ron. et al, "Teacher and Student Behavior in High- and Low-Ability Groups," Journal of Educational Psychology, 75:856-76, December 1983.

Kulik, Chen-Lin C., and Kulik, James A., Effects of Ability Grouping on Elementary School Pupils: A Meta-Analysis, Paper presented at the Annual Meeting of American Psychological Association, Canada, August, 1984.

Kulik, James A. and Kulik, Chen-Lin C., "Effects of Ability Grouping on Student Achievement," Equity and Excellence, 23:22-30, Spring, 1987.

Maxwell, Laurie, Making the Most of Ability Grouping Research in Brief, Office of Educational Research and Improvement, Washington, D.C., November, 1986, 1-3, ED280-888.

Ricco, Lawrence L., "Facts and Issues About Ability Grouping," Contemporary Education, 57:26-30, Fall, 1985.

Roberts, Alasdair, "Group Methods? Primary Teachers' Differentiation Policies in Mathematics," Educational Review, 36:239-248, November, 1984.

Rowan, Brian and Miracle, Andrew, "Systems of Ability Grouping and the Stratification of Achievement in Elementary Schools," Sociology of Education, 56:133-144, July, 1983.

Rule, Judy, Effects of Multigrade Grouping on Elementary Student Achievement in Reading and Mathematics, Paper received in the 1984 American Educational Research Association Division H award for Best Report of Instructional Research, May, 1983.

Slavin, Robert E., "Synthesis of Research on Grouping in Elementary and Secondary Schools," Educational Leadership, 67-74, September, 1988.

Thelan, Herbert, et al., "Social Issues and Educational Alternatives," Classroom Grouping for Teachability, New York, John Weley and Sons, Inc., 1967, 22-31.

Van Fossen, Beth, et al, "Curriculum Tracking and Status Maintenance," Sociology of Education, 60:104-122, April, 1987.

Watson, Ken., "Mixed-Ability Classrooms Produce Superior Results," Highway One, 57-63, Fall, 1985.

Webb, Noreen M., "Peer Interaction and Learning in Cooperative Small Groups," Journal of Educational Psychology, 74:642-655, November, 1985.

Wilson, Barry J., and Schmits, Donald W., "What's New in Ability Grouping," Phi Delta Kappan, 535-536, April, 1978.

STUDENT QUALIFICATIONS

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EDUCATION:	B.S. Elementary Education Indiana University at South Bend May 1980. Current: Completion of Masters work for graduation May 1989.
EMPLOYMENT:	Past experience as substitute teacher for S.B.C.S.C. 1980-1988 teacher at the seventh grade level. 1988-1989 teacher at the sixth grade level.
INTEREST IN TOPIC:	Having teaching experience at the middle and elementary level the last eight years, I have encountered numerous concerns regarding grouping according to C.T.B.S. and C.A.T. scores. Parental pressure, peer pressure and self-esteem along with to group or not to present many obstacles for the teacher as well as the student. I was interested in researching this topic.